



## MBA/MIB 5315 Statistical Methods for Management Decisions Section A (Summer 1)

Time: MW 1730-2050  
Location: MYL 013  
Course Text: *Business Statistics, a Decision-Making Approach*, 6<sup>th</sup> ed., David Groebner, P. Shannon, P. Fry, K. Smith, Prentice Hall, NJ, 2005, ISBN: 0130477850

### Instructor:

Dr. John A. Dobelman

[dobelman@stat.rice.edu](mailto:dobelman@stat.rice.edu) (until I get the UST one working)

Office Hours: Negotiable, by appointment only, 713 348 5369, or mobile 713 502 3894.  
Welder Hall 219 cubicle 3, 713 525 3132 x5983#, but not there that often.

Course Website: <http://www.stat.rice.edu/~dobelman/courses/mba5315.html>

Also, check the blackboard.

### Course Description:

This course is designed to introduce the student to statistical methodology useful for data analysis and managerial decision-making. Emphasis will be placed on applications through working examples and computer-assisted data analysis in lab sessions.

Course Content: Chapters 1–9 of text plus special topics, Possible other real-life data project(s)

- Ch 1,2,13 data, graphs, determinism vs. stochasticity, populations vs. samples, experimental design, sampling, inference, bivariate data; scatterplots, least squares regression and correlation
- Ch 3 data reduction, descriptive statistics, "normal" distribution
- Ch 4 randomness, probability concepts, random variables (r.v.'s), distribution moments (mean, variance, etc.); discrete models
- Ch 5 continuous probability models
- Ch 6,7 sampling distributions, counts and proportions, point and interval estimation: confidence, significance, statistical tests
- Ch 8 Introduction to hypothesis testing; power and inference, inference for single populations
- Ch 9 Hypothesis testing and inference for two populations

### Other Topics

- Ch \_\_ Introduction to Analysis of variance (ANOVA), two-factor analysis; Linear regression, correlation analysis, causation, and data transformations
- Ch \_\_ multivariate (multiple) regression and ANOVA
- Ch \_\_ Good-of-fit tests, contingency analysis
- Ch \_\_ general categorical data analysis
- Ch \_\_ time series analysis and forecasting
- Ch \_\_ non-parametric statistics
- Ch \_\_ Quality control, statistical process control (SPC)
- Ch \_\_ decision analysis - uncertainty vs. risk, utility theory, game theory

Grading: 50% assignments, 50% examination. Late policy: 20% penalty for HW turned in by next class; no credit for later than this.

Assignments (50%)

Homework: 25%

Final Project: 25%

Test/Quiz/Exam (50%)

Test 1: 25%

Test 2 (Final): 25%

Extra Credit: As needed

Other remarks.

If you choose to use a previous version of the textbook, it is your responsibility to use the correct edition for all assignment submissions.

Disabilities:

Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All discussions will remain confidential. Students with disabilities may also contact the Director of Human Resources concerning an accommodation.